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## FACSIMILE COVER SHEET

TOTAL NUMBER OF PAGES BEING SENT: 18☐ Original documents to follow by mail ☒ No originals will be sent

DATE: December 28, 2006

TO: Examiner Edward M. Johnson  
Group Art Unit 1754

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Application No.: 09/757,519

OUR REF.: 3132.07US02

Applicant: Horne et al.

Due Date: January 20, 2007

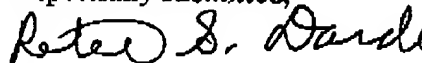
FROM: Peter S. Dardi, Ph.D.

PHONE #: 404-949-5730

Attached is the following for filing in the above-identified application.

- (1) Response to Notification of Non-Compliant Appeal Brief; and
- (2) Copy of missing pages of Appeal Brief (9 pages).

Respectfully submitted,




Peter S. Dardi, Ph.D.

Registration No. 39,650

## CERTIFICATE OF FACSIMILE TRANSMISSION

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Attorney Docket No.: 3132.07US02

Horne et al.

Confirmation No.: 8679

Application No.: 09/757,519

Examiner: Edward M. Johnson

Filed: January 9, 2001

Group Art Unit: 1754

For: METAL VANADIUM OXIDE PARTICLES

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCESRESPONSE TO NOTIFICATION OF NON COMPLIANT APPEAL BRIEF

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

INTRODUCTORY COMMENTS

In response to the Notice of Non-Compliant Appeal Brief of December 20, 2006, Applicants respectfully assert that a proper Appeal Brief was submitted on October 20, 2006. Applicants note that 47 pages were filed by facsimile to the USPTO. Of these 47 pages only 26 pages were scanned into PAIR. Of these 21 missing pages, 6 pages corresponded to U.S. Patent 5,512,214, and 6 pages corresponded to U.S. Patent 5,549,880. The remaining 9 pages are attached. These 9 pages included the Related Appeals Appendix. Thus, the previous Brief was fully compliant, and Applicants respectfully request entry of the Brief.

Respectfully submitted,

*Peter S. Dardi*

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*Please grant any extension of time necessary for entry; charge any fee due to Deposit Account No. 50-3863.*

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December 28, 2006  
Date

*Peter S. Dardi*  
Peter S. Dardi

B - U.S. Patent 5,512,214 to Koksang

**RELATED PROCEEDINGS APPENDIX**

The decision for Appeal No. 2006-0712 before the Board of Patent Appeals and Interferences is attached. This appeal involved a rejection over U.S. Patent 5,549,880 to Koksbang.

4W 2950.32-05-03

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

## UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte XIANGXIN BI, NOBUYUKI KAMBE,  
SUJEET KUMAR, and  
JAMES T. GARDNER

MAILED

MAR 09 2006

U.S. PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Appeal No. 2006-0712  
Application No. 09/606,884

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DOCKETING

MAR 13 2006

PATTERSON, THUENTE, SKAAR  
& CHRISTENSEN, P.A.

ON BRIEF

Before GARRIS, WARREN, and WALTZ, Administrative Patent Judges.  
WALTZ, Administrative Patent Judge.

## DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 47 through 52.<sup>1</sup> The remaining claims pending in this application are claims 1, 4 through 11, 13 through 28, and 30 through 46, all of which have been allowed by the

<sup>1</sup>An amendment subsequent to the final rejection was submitted by appellants and entered by the examiner (see the amendment dated Mar. 5, 2004, entered as per the Advisory Action dated Mar. 23, 2004; Brief, page 2). We note that the word "collection" in claims 48-50 does not find antecedent basis in claim 47.

File/Appeal  
CAFC decision  
5-9-05  
Record  
Board Decision  
5-9-05  
2828 rect.  
5-9-06  
28

Appeal No. 2006-0712  
Application No. 09/606,884

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examiner (Brief, page 2; Answer, page 2, ¶(3)). We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellants, the invention is directed to cathode compositions comprising submicron vanadium oxide particles and a binder, where these particles provide superior battery performance, especially in lithium-based batteries (Brief, page 2).

Representative independent claim 47 is reproduced below:

47. A cathode composition comprising vanadium oxide particles having an average diameter from about 5 nm to about 500 nm and a binder.

The examiner has relied on Koksang, U.S. Patent No. 5,549,880, issued on Aug. 27, 1996, as the sole evidence of unpatentability (Answer, page 3). Claims 47-52 stand rejected under 35 U.S.C. § 102(a) and (e) as anticipated by Koksang (*id.*). For reasons stated in the Brief, Reply Brief, and below, we reverse the rejection on appeal.

#### OPINION

The examiner finds that Koksang discloses secondary lithium batteries comprising a "lithiated vanadium oxide cathode active material," a lithium metal anode, and a polymer electrolyte or solid electrolyte separator, where the vanadium oxide particles are

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Application No. 09/606,884

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"in the form of a fine powder having a surprisingly small particle size on the order of 0.1 to 5 microns" (Answer, page 3).

The initial burden of establishing unpatentability, on any ground, rests with the examiner. See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). As correctly argued by appellants (Brief, pages 8-10; Reply Brief, pages 2-3), Koksbang does not disclose or suggest that the range of particle sizes taught is an average size or diameter as required by claim 47 on appeal and the examiner has not convincingly established that the disclosure of Koksbang should be interpreted or construed as an "average" size or diameter (Answer, page 4). The examiner has cited the different methods of preparation taught by Koksbang as evidence that it is "reasonable" to interpret the range taught by the reference as a range of average particle sizes, which thus overlap with the claimed range (*id.*). This evidence is not convincing for the following reasons. As correctly argued by appellants (Reply Brief, page 2), there is no disclosure or suggestion in Koksbang that the variation in reaction starting materials or parameters would alter the product properties, e.g., the particle sizes of the product (see col. 4, ll. 15-65). Furthermore, Koksbang specifically teaches the criticality of the "particle size" of the product, disclosing a range of particle



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sizes but never disclosing or suggesting an average of particle sizes or diameters (col. 2, ll. 59-61; col. 5, ll. 1-6; and col. 6, ll. 56-60). We note that the examiner has not submitted any substantive evidence that the term "particle size" was known in this art to mean an average particle size.

The examiner has found that the vanadium oxide particles disclosed by Koksbang are in the form of a fine powder with a particle size "on the order of 0.1 to 5 microns" (Answer, page 3). However, the examiner admits that Koksbang discloses "a lithiated vanadium oxide cathode active material" (Answer, page 3), and Koksbang only discloses particle sizes for the *lithium* vanadium oxide product (col. 2, ll. 59-61; col. 5, ll. 1-6; and col. 6, ll. 56-61). We find no disclosure in Koksbang of any particle size for the vanadium oxide *per se* (e.g., see col. 4, ll. 15-40). We have construed the term "vanadium oxide particles" as found in claim 47 on appeal with "the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art," taking into account any enlightenment of the term in the specification. *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). Appellants' specification discloses vanadium oxide nanoparticles *per se*, as well as the production of only vanadium oxide (see Figures 5-12; specification,

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page 4, ll. 19-21; page 5, l. 18-page 6, l. 17; and page 14, l. 8 et seq.). Although the transitional term "comprising" opens claim 47 on appeal to other elements or components,<sup>2</sup> we determine that the claimed "vanadium oxide particles," as understood by one of ordinary skill in this art and consistent with the specification, does not encompass other materials such as intercalated lithium.<sup>3</sup>

For the foregoing reasons and those set forth in the Brief and Reply Brief, we determine that the examiner has failed to establish a prima facie case of anticipation in view of Koksang. Therefore we cannot sustain the rejection on appeal.

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<sup>2</sup>See *Vehicular Techs. v. Titan Wheel Int'l, Inc.*, 212 F.3d 1377, 1383, 54 USPQ2d 1841, 1845 (Fed. Cir. 2000) ("A drafter uses the term 'comprising' to mean 'I claim at least what follows and potentially more.'").

<sup>3</sup>See related Appl. No. 09/246,076, now U.S. Patent No. 6,225,007 B1, issued May 1, 2001.

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The decision of the examiner is reversed.

**REVERSED**

  
BRADLEY R. GARRIS )  
Administrative Patent Judge )

  
CHARLES F. WARREN  
Administrative Patent Judge

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APPEALS  
AND  
INTERFERENCES

Thomas A. Waltz  
THOMAS A. WALTZ  
Administrative Patent Judge

TAW/sld

Appeal No. 2006-0712  
Application No. 09/606,884

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